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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ying Shen

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EXAMINER

YUN, EUGENE

ART UNIT

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/815,278	Applicant(s) SHEN ET AL.	
	Examiner EUGENE YUN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,9-16,29 and 32-46 is/are pending in the application.
- 4a) Of the above claim(s) 32-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,9-16,29 and 42-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/15/2008 has been entered.

Election/Restrictions

2. Applicant's election without traverse of claims 1, 3-5, 7, 9-16, 29, and 42-46 in the reply filed on 6/20/2008 is acknowledged.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 7, 9-16, 29, and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moerder (US 6,256,483) in view of Franchville et al. (US 6,278,485).

Referring to Claim 1, Moerder teaches a modular wide-range microwave communications unit comprising:

a precalibrated IF module having IF circuitry (see col. 6, lines 20-25) and an IF module memory operative for storing calibration values for the IF circuitry (see col. 12, lines 13-21);

at least one precalibrated RF module having RF circuitry (see col. 6, lines 26-33) and an RF module memory operative for storing RF calibration values for the RF circuitry (see col. 12, lines 13-21).

Moerder does not teach the RF circuitry including RF transmit circuitry and wherein the RF module memory includes an RF transmit module memory, the RF transmit circuitry including an attenuator, and IF detector and an RF detector, and with said RF module memory storing transmit calibration values for the attenuator and the IF and RF detectors. Franchville teaches the RF circuitry including RF transmit circuitry 14 (fig. 1) and wherein the RF module memory includes an RF transmit module memory, the RF transmit circuitry including an attenuator (see col. 12, lines 59-66), and IF detector and an RF detector (see col. 12, lines 45-48), and with said RF module memory storing transmit calibration values for the attenuator and the IF and RF detectors (see col. 12, line 67 to col. 13, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Franchville to said device of Moerder in order to increase the accuracy of calibration while maintaining the complexity of the circuit.

Referring to Claim 3, Moerder also teaches at least one precalibrated RF module including an RF receive module with the RF circuitry therein including RF receive circuitry (see col. 6, lines 26-33 and line 35) and wherein the RF module

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memory includes an RF receive module memory operative for storing RF receive calibration values for the circuitry (see col. 12, lines 13-21).

Referring to Claim 4, Moerder also teaches IF transmit circuitry further including additional IF transmit attenuators, IF receive circuitry with a plurality of IF receive attenuators, and a processor adapted to control the IF transmit circuitry based on transmit calibration values for such circuitry stored in the IF module memory and to control the IF receive circuitry based on calibration values for such circuitry stored in the IF module memory (see col. 21, lines 13-21).

Referring to Claim 5, Moerder also teaches a radio processing unit which includes the precalibrated IF module, the at least one precalibrated RF module, and a signal processing unit with a modem, that is operatively coupled to the radio processing unit (see col. 6, lines 25-33).

Referring to Claim 7, Moerder teaches a modular wide-range microwave communications unit comprising a plurality of precalibrated modules at least one of which being a precalibrated RF module (see col. 21, lines 13-21) having an RF transmit module with RF circuitry including RF transmit circuitry and a module memory (see col. 6, lines 20-33).

Moerder does not teach an RF transmit module memory operative for storing calibration values for the RF transmit circuitry, the RF transmit circuitry including a transmit attenuator, an IF detector and an RF detector. Franchville teaches an RF transmit module memory operative for storing calibration values for the RF transmit circuitry (see col. 12, line 67 to col. 13, line 2), the RF transmit circuitry including a

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transmit attenuator (see col. 12, lines 59-66), an IF detector and an RF detector (see col. 12, lines 45-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Franchville to said device of Moerder in order to increase the accuracy of calibration while maintaining the complexity of the circuit.

Referring to Claim 9, Moerder also teaches the transmit calibration values stored in the RF transmit module memory include calibration values for the attenuator and the IF and RF detectors (see col. 21, lines 13-21).

Referring to Claim 10, Moerder also teaches an RF receive module in which the RF circuitry includes RF receive circuitry and wherein the module memory in the precalibrated RF module includes an RF receive module memory operative for storing receive calibration values for the RF receive circuitry (see col. 21, lines 13-21).

Referring to Claim 11, Moerder also teaches the RF receive circuitry comprising a receive attenuator (see col. 15, lines 56-59) and wherein the calibration values stored in the RF receive module memory include calibration values for the receive attenuator (see col. 21, lines 13-21).

Referring to Claim 12, Moerder also teaches one of the plurality of precalibrated modules further including a precalibrated IF module comprising IF transmit circuitry, IF receive circuitry, and a processor, and an IF module memory (see col. 6, lines 20-25), with the processor being operably configured to control the IF transmit circuitry and receive instruction for controlling the IF receive circuitry based on IF transmit calibration

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values and IF receive calibration values stored in the IF module memory (see col. 21, lines 13-21).

Referring to Claim 13, Moerder also teaches an RF receive module having RF receive circuitry (see col. 6, lines 25-33), and an RF receive module memory operable for storing calibration values for the RF receive circuitry portion (see col. 21, lines 13-21).

Referring to Claim 14, Moerder also teaches a precalibrated IF module that includes IF transmit circuitry with a first digital attenuator operatively coupled to a first analog attenuator, a first mixer operatively coupled to the first analog attenuator, a second analog attenuator coupled to the first mixer, a second digital attenuator coupled to the second analog attenuator, and a transmit IF AGC coupled between the first digital and first analog attenuators (see col. 15, lines 49-59), and wherein the module memory in the precalibrated IF module is operable to store calibration values for the attenuators of the IF transmit circuitry (see col. 21, lines 13-21).

Referring to Claim 15, Moerder also teaches a precalibrated IF module that includes IF receive circuitry with a receive RSSI detector, a plurality of receive attenuators, a mixer, a further attenuator, and a receive AGC detector operably coupled in a manner where the receive RSSI detector is operable coupled to the plurality of receive attenuators, the plurality of receive attenuators are operably coupled to the mixer, the mixer is operably coupled to the further attenuator (see col. 15, lines 49-59), and the further attenuator is operably coupled to a receive AGC detector, and wherein the module memory in the precalibrated IF module is operable to store calibration

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values for the plurality of receive attenuators and further attenuator of the IF receive circuitry (see col. 21, lines 31-21).

Referring to Claim 16, Moerder also teaches a radio processing unit which includes the plurality of precalibrated modules one of which being a precalibrated IF module and another being the precalibrated RF module, and a signal processing unit having a modem, and operably coupled to the radio processing unit (see col. 6, lines 25-33).

Referring to Claim 29, Moerder also teaches a precalibrated IF module having: transmit IF circuitry, receive IF circuitry, and an IF module memory for storing IF calibration values for the transmit and receive IF circuitry (see col. 21, lines 13-21); and a processor operably configured to execute instructions including transmit instructions for controlling the transmit IF circuitry and circuitry of the RF transmit circuitry portion based on the IF calibration values and calibration values for the RF transmit circuitry portion, and receive instructions for controlling the receive IF circuitry and circuitry of the RF receive circuitry portion based on the IF calibration values and RF receive calibration values (see col. 4, lines 48-58).

Referring to Claim 42, Moerder teaches a modular wide-range microwave communications unit comprising:

a precalibrated RF module including an RF receive module in which the RF circuitry includes RF receive circuitry (see col. 6, lines 26-33) and wherein the module memory in the precalibrated RF module includes an RF receive module memory

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operative for storing receive calibration values for the RF receive circuitry (see col. 12, lines 13-21); and

a precalibrated IF module comprising IF transmit circuitry, IF receive circuitry (see col. 6, lines 20-25) and a processor and an IF module memory, with the processor being operably configured to control the IF transmit circuitry and receive instructions for controlling the IF receive circuitry based on IF transmit calibration values and IF receive calibration values stored in the IF module memory (see col. 12, lines 13-21);

Moerder does not teach the RF circuitry including RF transmit circuitry and wherein the RF module memory includes an RF transmit module memory, the RF transmit circuitry including an attenuator, and IF detector and an RF detector, and with said RF module memory storing transmit calibration values for the RF transmit circuitry. Franchville teaches the RF circuitry including RF transmit circuitry 14 (fig. 1) and wherein the RF module memory includes an RF transmit module memory, the RF transmit circuitry including an attenuator (see col. 12, lines 59-66), and IF detector and an RF detector (see col. 12, lines 45-48), and with said RF module memory storing transmit calibration values for the RF transmit circuitry. (see col. 12, line 67 to col. 13, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Franchville to said device of Moerder in order to increase the accuracy of calibration while maintaining the complexity of the circuit.

Referring to Claim 43, Franchville also teaches the transmit calibration values stored in the RF transmit module memory including calibration values for the attenuator and the IF and RF detectors (see col. 12, lines 59-67).

Referring to Claim 44, Moerder also teaches the RF receive circuitry comprising a receive attenuator (see col. 15, lines 56-59) and wherein the calibration values stored in the RF receive module memory include calibration values for the receive attenuator (see col. 21, lines 13-21).

Referring to Claim 45, Moerder also teaches the IF transmit circuitry with a first digital attenuator operatively coupled to a first analog attenuator, a first mixer operatively coupled to the first analog attenuator, a second analog attenuator coupled to the first mixer, a second digital attenuator coupled to the second analog attenuator, and a transmit IF AGC coupled between the first digital and first analog attenuators (see col. 15, lines 49-59), and wherein the module memory in the precalibrated IF module is operable to store calibration values for the attenuators of the IF transmit circuitry (see col. 21, lines 13-21).

Referring to Claim 46, Moerder also teaches the IF receive circuitry with a receive RSSI detector, a plurality of receive attenuators, a mixer, a further attenuator, and a receive AGC detector operably coupled in a manner where the receive RSSI detector is operable coupled to the plurality of receive attenuators, the plurality of receive attenuators are operably coupled to the mixer, the mixer is operably coupled to the further attenuator (see col. 15, lines 49-59), and the further attenuator is operably coupled to a receive AGC detector, and wherein the module memory in the

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precalibrated IF module is operable to store calibration values for the plurality of receive attenuators and further attenuator of the IF receive circuitry (see col. 21, lines 31-21).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-5, 7, 9-16, 29, and 42-46 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENE YUN whose telephone number is (571)272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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